

AMENDMENTS TO THE CLAIMS

1. (Original) A method of determining ElogD_{Oct} for chemical compounds which comprises:
 - a. Introducing said chemical compounds seriatim to the column of a reverse phase high performance liquid chromatographic system said column being an embedded amide functional group column; or a C-18 bonded column with low silanol activity; and
 - b. Eluting said compounds with a mobile phase containing MOPS buffer and a methanol/octanol mixture in which the proportions of said methanol/octanol mixture to said buffer are from 75 to 15% v/v; and with flow rates between 0.5 and 3 ml/min and
 - c. Measuring the retention time required to elute each sample from said column; and
 - d. Calculating ElogD_{Oct} from the retention time of each sample using equation 1: $\log D_{Oct} = 1.1267 (\pm 0.0233) \log k'_w + 0.2075 (\pm 0.0430)$ (Eq. 1).
2. (Original) The method of claim 1 wherein said compounds for which ElogD_{Oct} is to be determined are divided into groups according to calculated lipophilicity based on chemical structure and; ElogD_{Oct} is determined for all samples in a first group and; said column is equilibrated to the conditions for a second group.
3. (Original) The method of claim 1 wherein each of steps a) through d) is performed by robotic means under the control of a programmed computer.
4. (Original) The method of claim 1 wherein said column is an embedded amide functional group column.
5. (Original) The method of claim 1 wherein said column is a C-18 bonded column with low silanol activity.
6. (Original) The method of claim 1 wherein the buffer pH is between 4 and 8.

7. (Previously submitted) The method of Claim 1 wherein said mobile phase further includes the addition of about 0.15% of n-decylamine.

8. (Previously submitted) The method of Claim 4 wherein said mobile phase further includes the addition of about 0.15% of n-decylamine.

9. (Previously submitted) The method of Claim 5 wherein said mobile phase further includes the addition of about 0.15% of n-decylamine.